[0025] Arrangement and method for the production of photomasks in which at least one defect control system is connected to at least one repair system by a stationary data connection or online connection, and the defect control system and repair system are connected to one another by data in such a way that the results obtained on one of the systems are immediately available to the other system for further processing. The defect control system conveys detected defects to the repair system via a data connection for data exchange. An AIMS system is advantageously provided as defect control system and an electron beam system is advantageously provided for defect control.